

Appl. No. : 10/722,785
Amendment dated October 27, 2004

REMARKS/ARGUMENTS

This is intended to be a full and complete response to the Office Action dated July 1, 2004. In view of the amendments presented above and the following discussion, the Applicants believe that all claims are in allowable form.

Claims 1, 11 and 12 are pending in the application.

Rejections under 35 U.S.C. §103

Claims 1 and 11 stand rejected under 35 U.S.C. §103(a) as being unpatentable over DE4404672 to Lanvers ("Lanvers") in view of US Patent 5,788,917 to Herlache ("Herlache").

Applicant's invention as recited in claim 1 is directed to:

"A process for manufacturing a toothbrush comprising: a) providing a toothbrush mold having a head portion, a base portion, a toothbrush cavity located between said head portion and said base portion and having walls, an injection port for injecting molten plastic, and a gas injection port for injection at least one gas, wherein the gas injection port is positioned in the end of the base portion of the mold so that gas is injected into the mold cavity substantially centrally thereof and in a direction parallel to the longitudinal axis of the mold; b) injecting a predetermined amount of a molten plastic into the mold cavity to partially fill the cavity; and c) injecting said at least one gas through the gas injection port to direct the molten plastic into contact with the walls of the mold cavity ("emphasis added")."

Please note that in Applicant's claim 1, the gas injection port is positioned in the end of the base portion of the mold so that gas is injected into the mold cavity substantially centrally thereof.

Lanvers describes production of toothbrushes (see Lanvers, Figures 1-5). In Lanvers, it appears that gas is flowed in a perpendicular direction into a cavity (see Lanvers, Figures 1-5). The Examiner indicates that Lanvers fails to teach gas is injected in a direction parallel to the longitudinal axis of the mold. As such, the Examiner cites Herlache for such teachings.

Herlache teaches a method of making a plastic hand grip having a tubular body 26 around a shank 18 of a solid steel rod 12 (see Verlache, column 1, lines 59-60; column 2, lines 32-33). The shank 18 is mounted in a mold 56 to form a mold cavity 56 (see Verlache, column 3, lines 2-4). Plastic is injected and is quenched on the shank 18 and a segment 60 of the mold cavity 58, forming a tubular wall 72 (see Verlache column 3, lines 22-30). Gas is injected through a passage 62 defined by the tubular wall 72 (see Verlache, column, lines 37-41 and Figures 5A-5B). A gas-filled void 74 for inserting wires 52 therethrough is formed in the hand grip (see Verlache, column 3, lines 40-42, and column 4, lines 102, and Figures 3, 5B).

Herlache does not describe or suggest Applicant's invention as recited in claims 1 in which a gas injection port is positioned in the end of the base portion of the mold so that gas is injected into the mold cavity substantially centrally thereof. Herlache, in fact, teaches a completely different invention in which a wire conduit in a plastic hand grip is formed by injecting gas through a passage. The passage is formed by quenching liquid plastic near a solid steel rod in the mold cavity. It is clear from the teachings of Verlache (Figure 5A, B) that Verlache's gas is not injected into the mold cavity substantially centrally thereof, since such gas would be directed onto the outboard end 20 of the shank 18 and not through the desired passage 62.

Furthermore, the combination of teachings of Lanvers and Herlache does not teach or suggest Applicant's invention in which a gas injection port is positioned in the end of the base portion of the mold so that gas is injected into the mold cavity substantially centrally thereof. Thus, Applicant's claimed process as recited in claim 1 as well as Applicant's apparatus of claim 11 are patentable over this combination of references. Accordingly, the Applicants respectfully request that this rejection be withdrawn.

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Rejections under 35 U.S.C. §101

The Examiner has provisionally rejected claim 1 as claiming the same invention as copending patent application 10/101,126. Furthermore, claims 11 and 12 have been rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over patent application 10/101,126. Applicant's have expressly abandoned patent application 10/101,126 as of March 19, 2004. Since patent application 10/101,126 is no longer pending before the Office, Applicants contend that the double patenting rejection is now moot. It is respectfully requested that this rejection be withdrawn.


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Conclusion

The applicants submit that none of the claims, presently in the application, is obvious under the provisions of 35 U. S. C. § 103 or unpatentable under the provisions of 35 U. S. C. § 101. Consequently, the applicants believe that all of the claims are presently in condition for allowance. Accordingly, both reconsideration of this application and its swift passage to issue are earnestly solicited.

If, however, the Examiner believes that there are any unresolved issues requiring adverse final action in any of the claims now pending in the application, it is requested that the Examiner telephone Mr. James P. Barr, at (732) 524-2826, so that appropriate arrangements can be made for resolving such issues as expeditiously as possible.

Respectfully submitted,



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